

IN THE ABSTRACT:

Please add an abstract as follows:

In a fluid pumping apparatus suitable for use in drop on demand ink jet printing, a resiliently deformable chamber wall is acted upon to create acoustic waves, which in turn cause a fluid flow in a chamber outlet. The resiliently deformable chamber wall preferably includes both rigid and flexible portions. In an alternative arrangement a channel wall is provided with a region moveable in an actuation direction. An electromagnetic actuator operates under the principle of flux modulation. The invention is preferably of planar construction, manufactured using MEMS techniques.